

From glowbugs@theporch.com Sun Dec 31 02:08:58 1995
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Date: Sun, 31 Dec 1995 02:04:00 -0600 (CST)
Message-Id: <199512310804.CAA08367@uro.theporch.com>
Errors-To: ws4s@midtenn.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 62
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Status: 0

GLOWBUGS Digest 62

Topics covered in this issue include:

- 1) FS:50 ARRL Radio Amateur Handbooks '35-'85
by "C. J. Hawley Jr." <hawley@aries.scs.uiuc.edu>
- 2) Re: The Breadboard Lives
by Bill Turner <wrt@eskimo.com>
- 3) Bypassing Silcon Diodes
by kellymed@tmxbris.mhs.oz.au (Murray Kelly)

Date: Sat, 30 Dec 1995 16:41:37 -0600
From: "C. J. Hawley Jr." <hawley@aries.scs.uiuc.edu>
To: Multiple recipients of list <boatanchors@theporch.com>
Subject: FS:50 ARRL Radio Amateur Handbooks '35-'85
Message-ID: <30E5C021.ABB@aries.scs.uiuc.edu>

For Sale: Very good condition ARRL handbooks (replaced many of them over the years with better ones). 50 books from the years 1935 to 1985 (no two the same of course). Pickup is probably the only way. \$500.

Contact: Bruce Balsley W90TN (Old Tired Novice)
195 Blackthorn Dr.
Valparaiso, Indiana
46383
219-531-0077

Please call or write Bruce. He doesn't have email or even a computer (he's

a retired IBM'er so I guess he had his share of this stuff).

Chuck, KE9UW

Date: Sat, 30 Dec 1995 20:23:22 -0800
From: Bill Turner <wrt@eskimo.com>
To: EricNess@aol.com, Multiple recipients of list <glowbugs@theporch.com>
Subject: Re: The Breadboard Lives
Message-ID: <199512310424.UAA29257@mail.eskimo.com>

At 01:57 AM 12/27/95 -0600, EricNess@aol.com wrote:

>Greeting of the season to one and all.

-snip-

>After throwing everything together, I tried the supply out on the 3A4 regen
>receiver I built. I was extremely dissapointed by the loud hum that swamped
>out all but the loudest signals. Why would there be such a hum when I had
>such a huge filter cap and my receiver used very little current at all (two
>mA max)? After trying many things unsuccessfully, I decided to bypass the
>rectifier diodes and that did it. The hum was gone and I had a quick and
>dirty power supply for my experiments.

>

>The question I have is WHY does this work. This technique is a standard fix
>for broad band noise generated by linear power supplies used in computer
>equipment. I have done this often as part of my work but never thought much
>about why this works. Any theories?

>

>Eric, WD6DGX

>

Yep, we TV repair guys used to see this all the time when we tried to
replace vacuum tube rectifiers with solid state devices. The problem is
caused by the much more rapid switching characteristics of solid state
diodes compared to tubes. Because they turn on almost instantly, the
leading edge of the current waveform is a near-perfect square wave, which
any first year EE student will tell you is rich in harmonics. What you're
hearing is the xxxxxth harmonic of 60 cycles. A little filtering and you're
back in business. This electronics stuff is simple, but it ain't easy... :-)

73, Bill W7LZP
wrt@eskimo.com

Date: Sun, 31 Dec 95 14:27:08 AES
From: kellymed@tmxbris.mhs.oz.au (Murray Kelly)

To: glowbugs@theporch.com
Subject: Bypassing Silcon Diodes
Message-ID: <660@tmxbris.mhs.oz.au>

Thanks to Eric Ness for asking the question and Mike Burke for an answer - the buzz on rectifier diodes.

I have been fiddling with an RF speech clipper with some pretty strange ideas. eg I couldn't see why everyone wants to use really hard clipping, which creates great numbers of harmonics, only to then pass the waveform thru a narrow (expensive) crystal filter to round the corners off again.

What I wanted was rectifiers to switch a different gain path to result in almost vertical sides with rounded tops. (a square wave with round corners, if you like. Unfortunately the wave form is distorted more than I'd like even tho 1N4148s have up to 3pF of capacitance.

The parallel caps did the trick. At 9MHz you don't need much, but it rounds off the tops nicely.

Thanks for that and a Happy New Year to you all from Down Under. Only 9 hrs of this one left.

Murray Kelly. vk4aok.

End of GLOWBUGS Digest 62
